

THE SOUTHWEST CENTER FOR OCCUPATIONAL AND ENVIRONMENTAL HEALTH

SUMMARY ANNUAL REPORT

July 1, 2010 to June 30, 2011

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Training Grant in Occupational Health and Safety

Submitted by:

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**The University of Texas School of Public Health Education and Research Center
Southwest Center for Occupational and Environmental Health
Annual Report July 1, 2010 to June 30, 2011**

ERC Goals and Objectives

The mission of the Southwest Center for Occupational and Environmental Health (SWCOEH) is to promote health, safety, and well being in the workplace and the community. The overall goal of the Center is to respond to the critical need for well-trained occupational and environmental health specialists by providing graduate-level academic training and continuing education with an underlying foundation of a state-of-the-art occupational and environmental health research program. The SWCOEH was established as a NIOSH ERC in 1977, and was most recently refunded for the three-year period of 2011 – 2014.

ERC Programs and Multiple Campus Locations

Master degree level training was provided in Industrial Hygiene (IH) and Occupational Health for Nurses (OHN) along with doctoral level training in Occupational Epidemiology (OE) and Injury Prevention (IP) and postdoctoral residency training in Occupational Medicine (OM). Programs in Pilot Projects Research Training, NORA research support, Continuing Education and Outreach (CE), and Hazardous Substance Training (HST) complete the spectrum of existing programs within the ERC. The University of Texas School of Public Health (UTSPH) Education and Research Center (ERC) is housed in the SWCOEH in the Division of Epidemiology, Human Genetics and Environmental Sciences (EHGES) and incorporates faculty and students from various disciplines related to occupational and environmental health. The UTSPH has multiple campuses, the main one located in the Texas Medical Center in Houston and five others in Austin, Brownsville, Dallas, El Paso, and San Antonio. All campuses are linked electronically, facilitating seamless, quality teaching and research, expanded course offerings, interdisciplinary collaboration and access to regional stakeholders, as well as to expanded minority student populations. Additional ERC activities were carried out with the adjacent UT School of Nursing (UTSON), a collaborating institution in the Occupational Health for Nurses program.

Center Administration – Sarah A. Felknor, DrPH, Center Director (2005-May 2011), Elaine Symanski, PhD, Interim Center Director, Sharon P. Cooper, PhD, Deputy Director

The ERC was led by Sarah Felknor, MS, DrPH until May 2011 when she left the University. Dr. Elaine Symanski, PhD became Interim Center Director to assume leadership of the ERC and continues in that role under the new award. Previously, Dr. Symanski was affiliated with both the industrial hygiene and the occupational epidemiology programs of the ERC. She has been involved in occupational and environmental health research for over 15 years. Dr. Sharon Cooper, PhD, Professor and Regional Dean of the San Antonio campus, is deputy director for the ERC. Dr. Cooper's leadership role as deputy director also provides additional opportunities for collaboration between Houston and San Antonio faculty and trainees.

Industrial Hygiene – Lawrence Whitehead, PhD, Program Director

The program received reaccreditation in industrial hygiene from ABET, and has established an assessment committee including the faculty and external members to advise on the ongoing outcomes assessment required for ABET procedures. The IH curriculum also has a draft evaluation plan prepared as part of the planning for the current grant period, which will overlap in purpose with the ABET assessments. In all the IH program had 38 (7 NIOSH funded) enrolled trainees and graduated 11 (10 masters, 1 doctoral) in 2010-2011. Four trainees (3 masters, 1 doctoral) were newly appointed in fall 2010, and are, as of this report, in the second year of their programs of study and all are continuing to do well academically after successful internships. Three of the internships were in Region VI industries. Dr. Jimmy Perkins will retire after the current academic year, already being on a phased retirement. However, Dr. Inkyu Han will join the faculty in January 2012 following completion of a postdoctoral fellowship at Johns Hopkins, in the area of air and environmental chemistry.

Occupational and Environmental Medicine – Arch 'Chip' Carson, MD, PhD, Program Director

During the past year the OM Residency has maintained three traineeships. Dr. Thomas Hysler and Dr. Asim Abbasi entered the Residency on July 1, 2010 to begin their two-year programs of study. They are both presently engaged in full-time medical practice rotations that will conclude on June 30, 2012 with the completion of the Residency. A third resident, Dr. Monica Saavedra, began her one-year traineeship in November 2010. This, combined with her MPH degree from the University of Pittsburgh will make her eligible

to sit for the ABPM Certifying examination in fall of 2012. The OM Program participated at the American College of Occupational and Environmental Medicine national conference in Washington, DC in March 2011. Two residents also passed the certification examination for Medical Review Officer. Dr. Abbasi accompanied SPH faculty to Bangladesh where they researched occupational health issues in the Bangladesh rug making industry and established relationships with research and academic institutions there. In Fall of 2010, the OM Program hosted three residents from the Universitat Pompeu Fabra Occupational Medicine Residency in Barcelona for a one-month educational exchange and in June 2011 Dr. Saavedra spent a month at the UPF in Barcelona, where she engaged in professional practice experiences in several industries and clinics. Faculty participated as speakers at the Texas Medical Association, HTAOHN and TxCOEM annual educational meetings and in continuing education offerings of the SWCOEH. Program faculty and trainees participated in multiple consultations, including: the National Guard Qarmat Ali Illness Study, the Occupational Health in Bangladesh Rug Weavers study, the Nicaraguan Chronic Kidney Disease Epidemic research, the Mossville Louisiana Environmental Health Project, and others. Additionally we have evaluated and treated patients who are experiencing work-related or environmental-related illness or who have health-related workability issues.

Occupational Health for Nurses – Thomas Mackey, PhD., NP-C, FAAN, FAANP, Program Director

The OHN Program had three trainees enrolled in the masters program in the period July 2010 to June 2011. The OHN faculty have been active in delivering occupational health services to companies in Houston and throughout the State of Texas. A new venture in 2010 created another practice site in which one of the recent Occupational Medicine graduates has teamed with two nurse practitioners and Susan Parnell to deliver primary and occupational health services to 2,500 employees and their families at the worksite.

Occupational Epidemiology – Sharon Cooper, PhD, Program Director

During the last year, we were able to fund three full-time trainees and two trainees for tuition and fees only. One of our trainees, Christina Socias, was the recipient of a pilot project. One of our previous trainees, Dr. Philip Lupo became an Assistant Professor of Epidemiology at UTSPH. The San Antonio campus has increased its role within the ERC. Dr. Hasanat Alamgir, an occupational epidemiologist joined the San Antonio Regional Campus (SARC) in 2010, and together with Dr. David Gimeno and Dr. Sharon Cooper, the SARC is home to three of the seven occupational epidemiology faculty. In addition, SARC added a DrPH degree option in Environmental and Occupational Health in Fall 2010. The occupational epidemiology faculty have continued to expand their research portfolio; together, the faculty brought in approximate \$1.7 million in external research funding during the reporting period. Statewide, we have increased our research collaborations with the NIOSH Agricultural Center at The University of Texas Health Science Center at Tyler and with Texas A&M School of Rural Public Health, where we have formal research agreements with both institutions in the area of agricultural health and safety. We continue our relationship with the Texas Department of State Health Services (TDSHS) via a NIOSH-funded state-based Occupational Safety and Health Surveillance grant, awarded through a competing renewal in 2010 to the Environmental and Injury Epidemiology branch. Our web-based course in occupational epidemiology has been enhanced by offering a doctoral-specific section. The doctoral students wrote a paper using occupational health indicator data from the TDSHS. To strengthen collaboration with epidemiologists in our region and the western states, the ERC participated in the NIOSH Western States Occupational Network Conference in Denver, which brought together state health department occupational health professionals from 19 western states, and representatives from NIOSH, ERCs and Agricultural Centers.

Occupational Injury Prevention – Benjamin Amick, III, PhD, Program Director

The program had four enrolled trainees (2 NIOSH funded) in 2010-2011. Cecilia Montano and Timothy Read both received funding for their respective pilot projects. In June 2011, Amber Mitchell presented her dissertation at the National Healthcare Stakeholders Summit at Thomas Jefferson University. Dr. David Douphrate established the SARC Ergonomics Research Laboratory dedicated to the study of occupational injuries and illnesses. The laboratory has state of the art motion analysis equipment, electromyography instrumentation, and physiological monitoring and data loggers. The laboratory is used for teaching exposure assessment methods, job simulation studies, and biomechanical analyses of occupational activities. The laboratory is equipped with an eight channel portable EMG unit that is available for laboratory experiments for work simulations as well as field-based data collection. The laboratory is also equipped with wireless, direct measurement motion capture technology for laboratory and field-based data collection. Dr Douphrate received

funding in 2011 for a five-year study to address parlor design, milking tools and worker productivity. Dr. Amick made a keynote presentation at PREMUS 2011 on The Economics of Musculoskeletal Injuries.

Continuing Education – Janelle Rios, PhD, Program Director

From July 1, 2010 to June 30, 2011, the Continuing Education program delivered 49 courses training a total of 1,663 course participants. Of special note is the delivery of the Occupational Medicine for Primary Care Practitioners conference held in San Antonio, Texas on April 29-30, 2011. Designed to enhance the clinical skills and knowledge of primary care providers in their treatment of patients with work-related injuries and illnesses, we assembled experts in their respective fields from Universities and private practices to provide skilled instruction to our attendees. The highlights of the conference were an in-depth speaker-led discussion on best practices in navigating the Workers Compensation system and an interesting series of multi-media case studies presented by a physician panel. The success of this conference is credited to the collaborative efforts of the SWCOEH, the Texas Institute of Occupational Safety and Health (a NIOSH Training Project Grant program), and the Deep South Center for Occupational Health and Safety (a NIOSH Education and Research Center).

Hazardous Substance Training – Robert Emery, DrPH, Program Director

The Hazardous Substance Training (HST) Program delivered 11 courses to a total of 200 individuals from July 1, 2010 to June 30, 2011. Of special note during this period was the provision of a special educational session entitled “Radioactive Contamination Monitoring Strategies for Protecting Public Health from Releases from the Fukushima Daiichi Nuclear Power Plants”. This training curriculum was developed in response to numerous requests for information following the release of radioactivity at the Fukushima Daiichi Nuclear Power Plant Station, a result of the March 11, 2011 earthquake and tsunami near Japan. The objectives of this two-hour training event were to provide a brief description of typical operations at a nuclear power plant, explain the unfolding events of the disaster and how this led to the release of radioactivity to the environment, describe the associated risks to the public, describe the monitoring programs and strategies in place to protect workers and the public (including residents of the U.S.), and methods for industrial hygienists and other safety professionals can use in response to disaster events involving releases of radioactive materials.

Pilot Projects Research Training – David Gimeno, PhD, Program Director

The PPRTTP is a critical element in the strategy of the SWCOEH to foster its mission and to develop its regional outreach activities. The mission of the PPRTTP is to enhance the SWCOEH's occupational health and safety research training mission and to foster stronger inter-institutional ties in occupational health research within Federal Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas). Every year we aim to making at least one award in each state of our federal region. In the 2010-2011 reporting period applications were accepted in April 2010. A total of 24 letters of intent, followed by 13 full applications were received and eight were awarded for a total of \$79,874. Award recipients were affiliated with Texas A&M University, The MD Anderson Cancer Center (Houston), The University of Texas at Austin, Texas Tech University, University of Tulsa (2 recipients), The University of Texas School of Public Health, and Southeastern Louisiana University. A successful Pilot Projects Symposium was held on June 24, 2010 during which pilot project recipients presented their work.

NORA Research Training - Sarah A. Felknor, DrPH, Center Director (2005-May 2011), Elaine Symanski, PhD, Interim Center Director, Sharon P. Cooper, PhD, Deputy Director

The NORA Research Support Program supported the development of an effective research administration and grants management infrastructure with the ERC. This infrastructure helped ERC faculty and students 1) identify research grant opportunities, 2) prepare grant applications, 3) manage extramural funding, 4) provided technical assistance in laboratory and information technology, 5) assisted with grant reports preparation and close-out activities, and 6) effectively disseminated research results through scientific publications, other print and electronic media, continuing education offerings and outreach seminars. The NORA program also promoted moving research to practice and supported continuing education activities and supported a new outreach focus on the use of innovative networks to disseminate health and safety training messages, especially among Latino workers in Texas and Region VI through expanded *promotora* networks. Faculty have continued to conduct research in the following NORA sectors: Agriculture, Forestry & Fishing, Manufacturing, and Health Care; and in the following NORA Coordinated Emphasis areas: Worklife Initiative (now Total Worker Health), Surveillance, and Occupational Health Disparities.